

**WHAT IS CLAIMED IS:**

1. A microfluidic device, comprising:

a body structure having a microscale cavity disposed therein; and

a set of particles disposed within the microscale cavity, wherein said sets of particles is flowable, and wherein the microscale cavity comprises a first microchannel comprising at least one reagent flow region and at least one particle capture region, wherein the at least one particle capture region has an increased depth relative to the at least one reagent flow region.